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(21) Application Filing No.	H7-203536	(71) Applicant	595089798 Rimo Kabushiki Kaisha 2-13-3 Kojima, Taito-ku, Tokyo
(22) Application Filing Date	August 9, 1995	(72) Inventor	Wataru Mori Rimo Kabushiki Kaisha 2-13-3 Kojima, Taito-ku, Tokyo
		(74) Agent	Patent Attorney Mikio Nakajima

(54) [Title of the Invention] Combination body of a container for fire extinguishing use and a lighter

(57) [Abstract]

[Problem] Superior fire extinguishing performance and a form that is easy to make and not troublesome to carry around

[Solution Means] The present invention is characterized in that a tubular container with a slanted insertion slot and a lighter have been combined. In the present invention, in Fig. 1, the housing 2 of a lighter 1 and a container for fire extinguishing use 4 have been integrated and formed, and a slant of 6° has been provided for the insertion slot 5 of the container for fire extinguishing use 4. In addition, a container for fire extinguishing use and a lighter housing part are formed in one unit. The lighter housing is housed in this housing part. A pipe-shaped container has fixation members, and it is attached to the lighter housing by means of these.

[see original for figure]

[Claims]

[Claim 1] A combination body of a container for fire extinguishing use and a lighter characterized in that a tubular container with a slanted insertion slot and a lighter have been combined.

[Claim 2] A combination body of a container for fire extinguishing use and a lighter characterized in that the combination body mentioned in Claim 1 integrates a tubular container on the side part of a housing, and the inner surface of said tubular container is a cylindrical shape with said insertion slot slanted to the outside.

[Claim 3] The combination body of a container for fire extinguishing use and a lighter mentioned in Claim 1 characterized in that the tubular container is provided with a lighter housing part.

[Claim 4] The combination body of a container for fire extinguishing use and a lighter mentioned in Claim 1 characterized in that the tubular container has fixation members that attach to the lighter.

[Claim 5] The combination body of a container for fire extinguishing use and a lighter mentioned in any of claims 1 to 4 characterized in that the angle of inclination is 10°C – 80° heading downwards.

[Detailed Description of the Invention]

[0001]

[Industrial Field of Application]

The present invention relates to a combination body of a container for fire extinguishing use and a lighter, and in still more detail relates to a combination body of a container for fire extinguishing use and a lighter having a pipe-shaped container suitable for extinguishing the burning of a cigarette.

[0002]

[Related Art]

In recent years the antismoking movement has become active and smokers often feel uncomfortable. In addition, needless to say, the ashes from smoking a cigarette cannot be discarded as they are, and, when it occurs that while smoking a lit cigarette must be extinguished quickly, there is often the embarrassing situation that there is no ashtray in the vicinity. In this kind of situation, various portable cigarette fire extinguishing apparatus are known. For example, there are known box-shaped containers with lids and containers with small holes and the like that can be put into a pocket and kept, and then taken out and used when necessary.

[0003]

[Problems the Invention is to Solve]

The present situation, however, is that the above-mentioned kind of portable cigarette fire extinguishing apparatus is put in a pocket and kept there, but because the above-mentioned box-shaped container with lid is box shaped, it is bulky and inconvenient to carry around. In addition, carrying around cigarettes and a lighter together feels even more inconvenient.

[0004]

Accordingly, as a result of having diligently studied these various problem points, the present inventor has discovered an apparatus that uses a pipe shape as a container for extinguishing usage in particular, and through the integration of this and a lighter, obtains a simple form superior in extinguishing a lit cigarette and that is not troublesome to carry around, and has come to create the present invention described herein.

[0005]

Consequently, for the problems the present invention is to solve, this offers a combination body of a container for fire extinguishing use and a lighter that is superior in fire extinguishing performance, of a simple form and that is not troublesome to carry around.

[0006]

[Means for Solving the Problems]

The problems the present invention is to solve are achieved by means of each of the following inventions, respectively

- (1) A combination body of a container for fire extinguishing use and a lighter characterized in that a tubular container with a slanted insertion slot and a lighter have been combined.
- (2) A combination body of a container for fire extinguishing use and a lighter characterized in that the combination body mentioned in the above-mentioned paragraph 1 integrates a tubular container on the side part of a housing with said housing, and along with the inner surface of said tubular container being a cylindrical shape, said insertion slot is slanted to the outside.
- (3) The combination body of a container for fire extinguishing use and a lighter mentioned in the above-mentioned paragraph 1 characterized in that the tubular container is provided with a lighter housing part.
- (4) The combination body of a container for fire extinguishing use and a lighter mentioned in the above-mentioned paragraph 1 characterized in that the tubular container has fixation members that attach to a lighter.
- (5) The combination body of a container for fire extinguishing use and a lighter mentioned in any of the above-mentioned paragraphs from 1 to 4 characterized in that the angle of inclination is  $10^{\circ} - 80^{\circ}$  heading downwards.

[0007]

When the present invention is more specifically explained below, the combination body of a container for fire extinguishing use and a lighter of the present invention is characterized in that a tubular container with slanted insertion slot and a

lighter have been combined. The inner surface of this tubular container consists of a pipe-shaped body of a circular shaped cross-section, and, due to the fact that the bottom of one end is a closed pipe together with the fact that the open part or insertion slot of the other end is slanted on the outside, when a lit cigarette is put in, not only can it promptly be inserted, but since that space becomes small when a lit cigarette is put in, the amount of carbon dioxide in that space increases and fire extinguishing is promoted. Furthermore, when the tubular container on the side part of the housing of the lighter is integrated and formed with this housing, that configuration and shape becomes simple and has the superior effect that there is no inconvenience at all when carried it around. In the present invention the outer shape of the tubular container is not particularly limited and can be made a desired shape in terms of beauty that conforms to the outer shape.

[0008]

Furthermore, when the combination body of a container for fire extinguishing use and a lighter is provided with a lighter housing part, that lighter housing part consists of a case and a container for fire extinguishing use formed in one body for this. Additionally, the tubular container has fixation members attached to a lighter and has the integration effect as mentioned above. When this is fit into a lighter and attached, it has the effect of integration like the above-mentioned. When the container for fire extinguishing use has been integrated with a case, and when a tubular container has fixation members, especially when the material thereof is aluminum, the pipe that makes up the container for fire extinguishing use has superior heat conductivity, and hence, the metal of the pipe absorbs the heat, and fire extinguishing is promoted still more.

[0009]

In the present invention it is desirable for the angle of the slant of the insertion slot or the opening part of the above-mentioned container for fire extinguishing use to be  $10^{\circ}$  -  $80^{\circ}$  heading downwards with respect to the lighter.  $15^{\circ}$  -  $70^{\circ}$  is more desirable, and  $20^{\circ}$  -  $60^{\circ}$  is still more desirable. By limiting the angle to  $10^{\circ}$  -  $80^{\circ}$  in this way, it is convenient for hurriedly inserting a lit cigarette. When the slant angle is smaller than  $10^{\circ}$ , since the tip of the opening is pointed, there is an accompanying danger in using it as

such. Further, when a cover is used, the cover becomes long, which is not desirable. In addition, when this angle exceeds 80°, rapid insertion is difficult.

[0010]

In the present invention, when a pipe-shaped container is used as a container for fire extinguishing, various shapes can be used for the tip shape of the opening's slanted part, such as, the unmodified shape formed by the slanted part, the slanted part formed as it is, the shape with the tip rounded and the corners rounded off, the shape with the front edge of the tip part cut off, and the shape with the corners rounded. With the present invention, a pipe-shaped container, even as it is, can achieve the purpose of sufficient fire extinguishing, but providing a lid is also acceptable. When a lid is provided, not only is better fire extinguishing action is promoted, but there is an action that prevents odors from spreading when a cigarette is extinguished. In addition, a hinge is desirable for the lid provided on the opening part.

[0011]

When a pipe-shaped container is used as the container for fire extinguishing concerning the present invention, the material thereof is not particularly restricted, but taking into consideration workability, thermal conductivity, economical efficiency and the like, aluminum, stainless steel, copper, brass, iron, gold, silver, platinum and the like are desirable. Depending on the purpose of use, appropriate thicknesses or lengths of these rods are used. The methods normally used in this technical area are acceptable for the processing methods of these metals. For example, processing such as grinding, stretching, and molding can be mentioned. Furthermore, when the tubular container on the side part of the housing is formed integrated with the housing, plastic is desirable for the material thereof.

[0012]

[Operation of the Invention]

When the combination body of the present invention of a container for fire extinguishing use and a lighter is integrated with the housing of a lighter, the shape

thereof is simple, carrying [it] around is convenient, and it is advantageous when there is no ashtray. Furthermore, since the interior shape of the container for fire extinguishing use is a circular shape that is concentric with a cigarette, when a lit cigarette is placed inside, that space shrinks, the amount of carbon dioxide increases, and fire extinguishing is promoted. Since there is good heat conductivity because the pipe-shaped container for the fire extinguishing container use is made of aluminum, heat is absorbed at once and the burning of the cigarette is extinguished. Furthermore, since the opening part of the pipe is slanted with respect to the lengthwise direction of this pipe, the area of the opening becomes larger and insertion of a lit cigarette becomes easy. In addition, because this opening is provided with a slant, when a lit cigarette is inserted from the tip of the opening, there is the advantage that it is extremely easy to insert.

[0013]

[Embodiment]

Below, embodiments of the present invention are explained with reference to the drawings, but the present invention is not limited by these examples.

[0014]

Fig. 1 is a side view that shows the lighter of the present invention in which the housing interior integrates and provides a container for fire extinguishing use of a cylindrical shape, and Fig. 2 is the top view thereof. Fig. 3 is a perspective view that shows the container for fire extinguishing use that has a lighter housing part. Fig. 4 is a side view that shows the lighter housed. Furthermore, Fig. 5 is a side view that shows a pipe-shaped container that has fixation members for attaching to a lighter, and Fig. 6 is a side view that shows those fixation members attached to a lighter. In addition, Fig. 7 is a top view of the pipe-shaped container that has the fixation members.

[0015]

In Fig. 1 and Fig. 2 the combination body of a container for fire extinguishing use and a lighter of the present invention was integrated and formed of the housing (made of plastic) 2 of the lighter 1 as the container for fire extinguishing use. A slant is provided

for the insertion slot 5 of the container for fire extinguishing use 4 and is 6° in this example. 3 is the fuel storage part, in other words, the fuel container. 6 is the windshield; 7 is the gas lever; and 8 is the striker wheel. The diameter of this container for fire extinguishing use 4 is inner diameter 8.0 mm. As for when it is used, it is used so as to extinguish a burning cigarette by the insertion of a lit cigarette from the lit end from the insertion slot of the slanted part 5, but at this time the burning of the cigarette goes out immediately. In addition, carrying around is convenient since it is not bulky.

[0016]

Furthermore, in Fig. 3 and Fig. 4, as for the housing container 10, the container for fire extinguishing use 41 and the lighter housing part 11 are formed in one body, and the housing 2 of the lighter 1 is housed in that housing part 11. Fig. 4 shows this housing condition. Furthermore, in Fig. 5 through Fig. 7, the pipe-shaped container 42 that has fixation members 43 is attached to the housing 2 of the lighter 1. The fixation members 43, as shown in Fig. 7, are extended relative to each other in the shape of a crane's beak from both sides of the cylinder shaped container 42, and are arranged at this time so as to sandwich and fix the body of the housing 2 of the lighter 1 by means of a spring. The bottom 9 of the pipe-shaped container 42 is made a closed pipe, and that shape may be rounded or angular.

[0017]

[Effects of the Invention]

The combination body of a container for fire extinguishing use and a lighter of the present invention is either formed with a lighter and a container for fire extinguishing use integrated or provides a removable housing container combined with a lighter using fixation members for attachment use. The shape thereof is also simple and, in addition, not troublesome to carry around and extremely convenient. In addition, since the interior of the container for fire extinguishing use is made with a circular shaped cross-section, it produces the superior effect that fire extinguishing is possible at once.

[Brief Description of Drawings]



[Fig. 1] is a side view that shows the combination body of the present invention that has integrated a container for fire extinguishing use and a lighter.

[Fig. 2] is a top surface view of the combination body of the present invention shown in Fig. 1.

[Fig. 3] is a perspective view that shows another example of the combination body of a container for fire extinguishing use and a lighter of the present invention.

[Fig. 4] is a side view that shows the combination body that has housed the lighter of Fig. 3.

[Fig. 5] is a side view that shows still another example of the combination body of a container for fire extinguishing use and a lighter of the present invention.

[Fig. 6] is a side view that shows the lighter combination body with the fixation members concerned with the present invention attached.

[Fig. 7] is a top surface view of the pipe-shaped container that has the fixation members concerned with the present invention shown in Fig. 5.

#### [Explanation of Reference Numerals]

- |    |                                      |
|----|--------------------------------------|
| 1  | Lighter                              |
| 2  | Housing                              |
| 3  | Fuel container                       |
| 4  | Container for fire extinguishing use |
| 5  | Slanted part                         |
| 6  | Windshield                           |
| 7  | Gas lever                            |
| 8  | Striker wheel                        |
| 9  | Bottom part                          |
| 10 | Housing container                    |
| 11 | Entrance                             |
| 41 | Cigarette insertion slot             |
| 42 | Pipe-shaped container                |
| 43 | Fixation member                      |

[Fig. 1] [see original for figure]

[Fig. 2] [see original for figure]

[Fig. 3] [see original for figure]

[Fig. 4] [see original for figure]

[Fig. 5] [see original for figure]

[Fig. 6] [see original for figure]

[Fig. 7] [see original for figure]